2S Trimmer
User Manual

Nagel 2S Trimmer

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1. Safety

- The 2-Side Trimmer may only be plugged in to an approved and by circuit breakers protectedelectrical installation, which is secured with a maximum of 16A.
- The outlet socket shall be installed near the equipment and shall be easily accessible.
- Never put your hands, other body parts or anything else then booklets within trimming specifications in the infeed or outfeed of the 2-Side Trimmer.
- Before cleaning, maintenance or repairs always be sure to switch off the power switch and disconnect the appropriate power cord.
- Always follow all warnings marked on or supplied with the equipment.
- The equipment should only be placed on a solid surface with adequate strength to hold the extra weight of the machine besides the usual maximum load.
- Always exercise care while moving or relocating the equipment.
- Keep magnets and all devices with a strong magnetic field away from the machine.
- Never attempt to perform maintenance or repairs other than described in this manual.
- Never remove covers or guards that are fastened with screws.
- Never install the equipment near a radiator or any other heat source.
- Never override or bypass electrical or mechanical interlock devices.
- In case of unusual sounds or noises, abnormal surface temperature or odours disconnect the equipments power source immediately and consult a qualified technician.

The manufacturer cannot be held responsible for arbitrary changes in the machine and the originated damage.

Make sure that the 2-Side Trimmer is NOT powered during installation or service activities.

This is a Class A product. In a domestic environment this machine may cause radio interference. In which case the user may be required to take adequate measures.

Note: A domestic environment is an environment in which a radio and television receivers can be expected inside a range of 10 meters of the concerning machines.

RoHS compliant

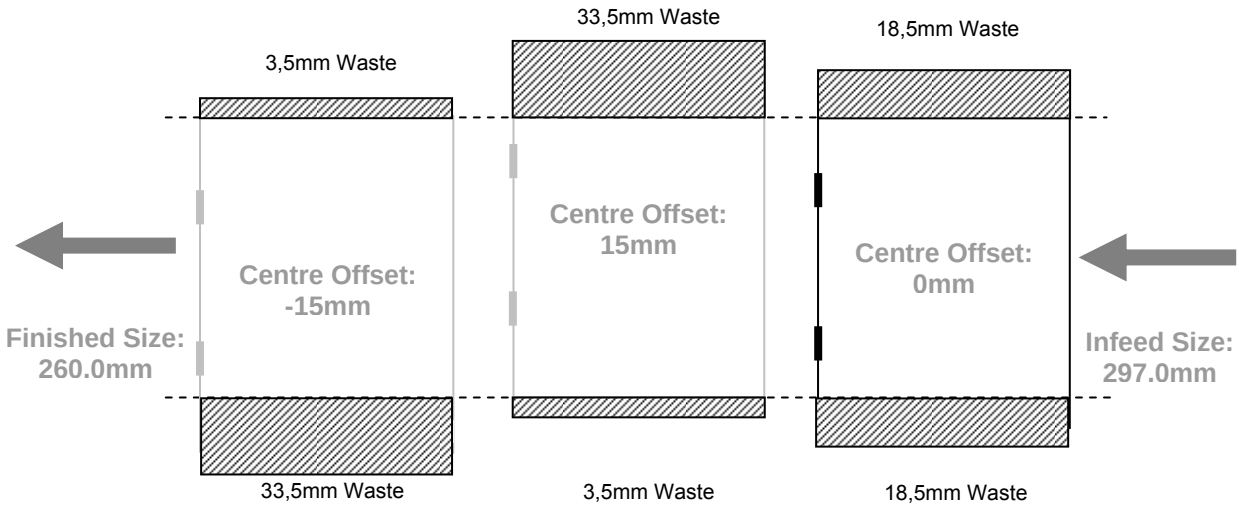
The 2-Side Trimmer is RoHS compliant.
ONLY use RoHS compliant replacement parts ordered from NAGEL.

2. General

With the addition of the 2-Side Trimmer to the NAGEL product range, a cost effective full-bleed solution is available which has a small footprint and is easily to operate. This machine is designed with high reliability in mind, which means that it has been designed for long run production.

The main goal of the 2-Side Trimmer, further referred to as 2S Trimmer or 2S Tr, is that it can be used for trimming the bleed off the booklet. Booklets with a maximum up to 25 sheets 80g/m2 (50 folded) can be trimmed from 2mm to 35mm on each short edge of the booklet, to a minimum of 200mm and a maximum of 320mm finished size. Thereby it is also possible to trim asymmetrical. All actions concerning operating the2S Trimmer and adjusting the trim settings can easily be done by using the User Interface (UI) on the 2S Trimmer.

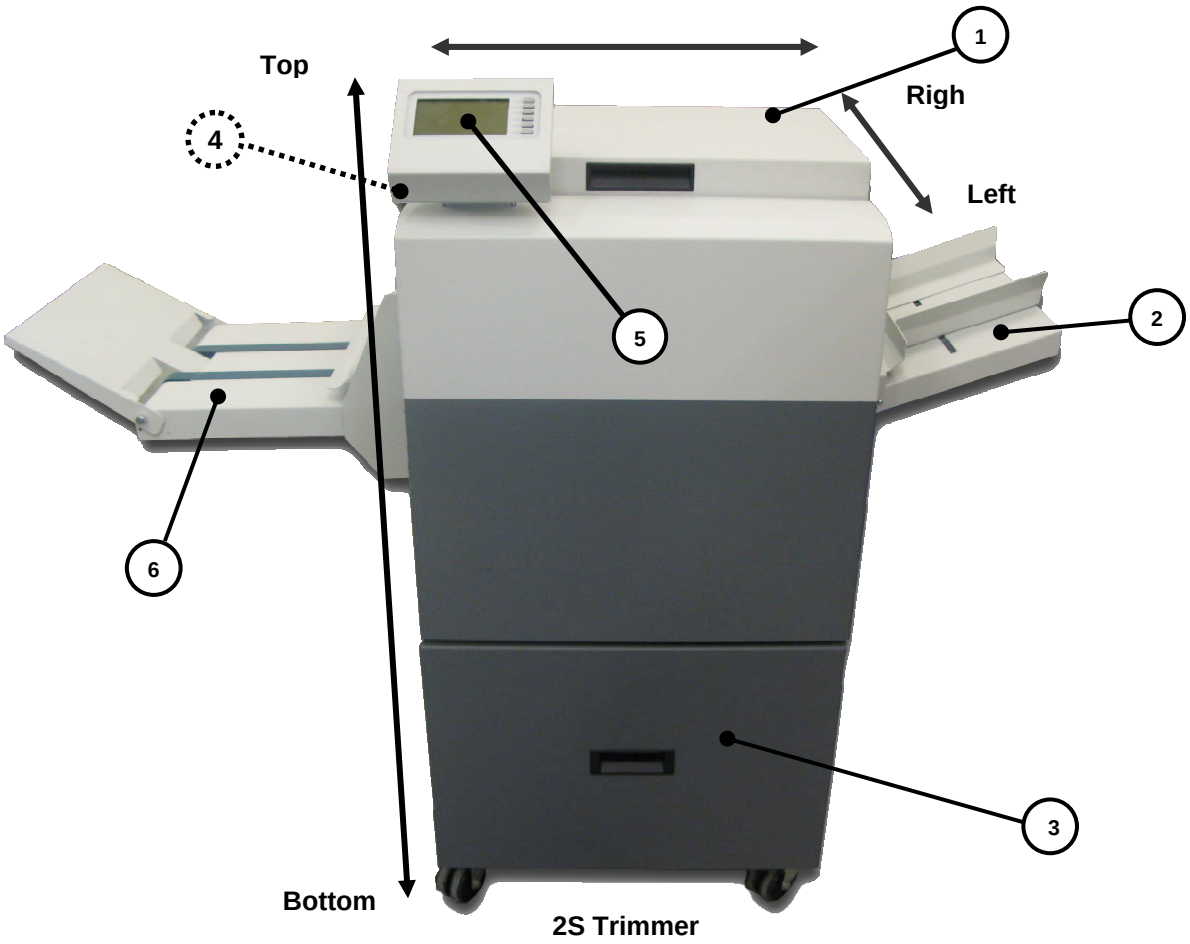
For example in the schedule mentioned below is schematically rendered some results which are possible with the2S Trimmer by using a different Center Offset (symmetrical or asymmetrical):



3. Basic information 2S Trimmer

See the picture below to get familiar with the components of the 2-Side Trimmer.

All directions are seen from the paper flow direction.



No.	Description
1	Top Cover
2	Booklet Hand Infeed
3	Trim Waste Bin
4	Power switch (inside)
5	User Interface (UI)
6	Belt Stacker

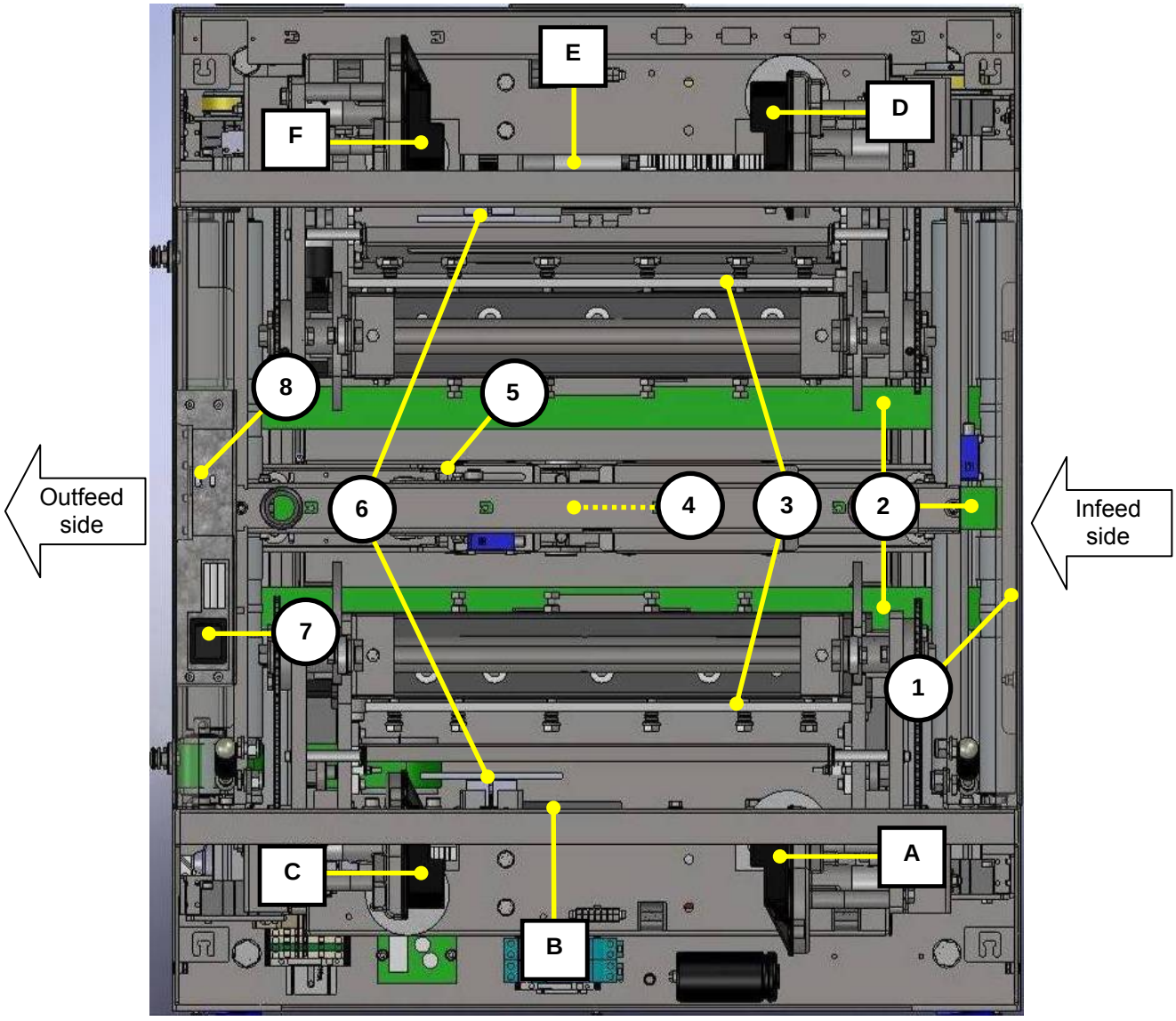
This manual applies to the 2S TRIMMER.

Due to the mirroring, typical Front and Rear designations which normally is viewed from the operator location has been replaced by Left and Right. Left and Right is viewed from the paper input direction.

Clarification:
Left = Front for 2S TRIMMER
Right = Rear for 2S TRIMMER

3. Basic Information (continued)

See the Top View picture below to get familiar with the components inside the machine.



No.	Description
1	Docking Bracket
2	Transport Belts
3	Knives
4	Solenoid
5	Trimmer Stop
6	Side Joggers
7	Power Switch
8	Interlock Switch

No.	Description
A	Motor 1, Knife
B	Motor 7, Side Jogger
C	Motor 2, Knife
D	Motor 3, Knife
E	Motor 8, Side Jogger
F	Motor 4, Knife

4. Operating the 2S Trimmer

This section explains how to use the 2S Trimmer during normal operation.

From either side (top or bottom) 40mm of the finished booklet should be free from staples to ensure safe operation.

NOTE: The System Setup has to be set once.

4.1 System Setup

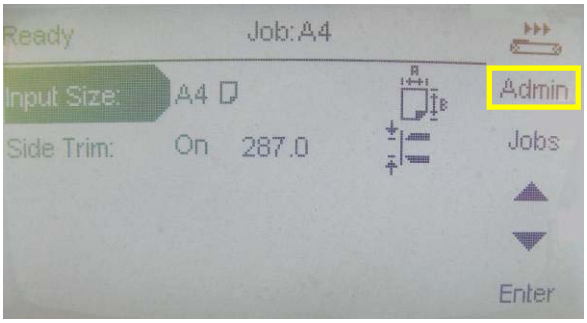


Fig. 1

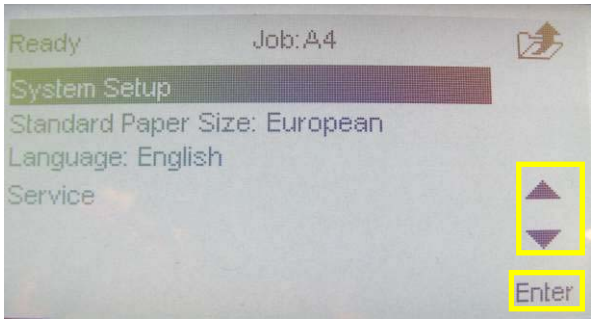


Fig. 2

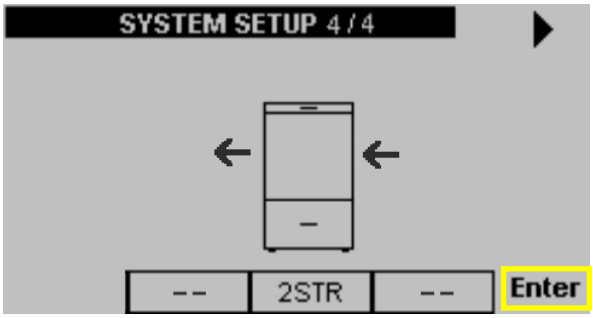


Fig. 3

Fig. 4

Step	Action	Remarks
1.	Open the Top cover of the 2S Tr.	
2.	Turn on the 2S Trimmer with the Power Switch	**Attention: Check if the Trim Waste Bin Drawer is closed, otherwise the 2S Trimmer may signal an error 'Cover Open'.**
3.	Close the Top cover of the 2S Tr.	
4.	Enter 'Admin' menu	Press the 'Admin' button (Fig. 1)
5.	Enter 'System Setup' menu	Use the '▲ / ▼ buttons' to select 'System Setup' and press the 'Enter' button. (Fig. 2)
6.	Select System Setup	Select the correct System Setup conform to the 2S Tr (4 / 4) (Fig. 3) Save and confirm with [Enter] **Attention: After saving the 2S Trimmer will restart (Fig. 4).**

4. Operating the 2S Trimmer *(continued)*

4.2 Language

NOTE: The Language has to be set once.

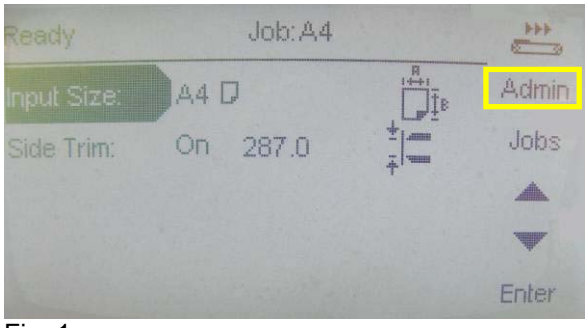


Fig. 1

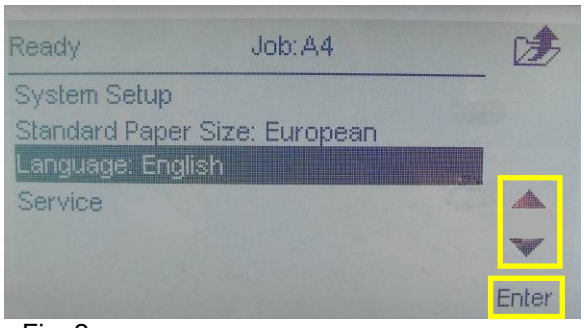


Fig. 2

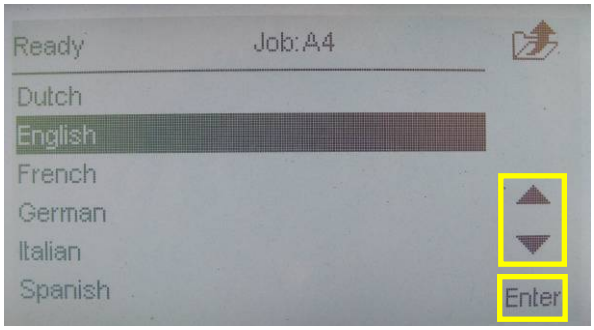


Fig. 3

Step	Action	Remarks
1.	Enter ‘Admin’ menu	Press the ‘Admin’ button (Fig. 1)
2.	Enter ‘Language:’ menu	Use the ‘▲ / ▼ buttons’ to select ‘Language:’ and press the ‘Enter’ button. (Fig. 2)
3.	Select Language	Use the ‘▲ / ▼ buttons’ to select the correct Language (Fig. 3). Save and confirm with [Enter]

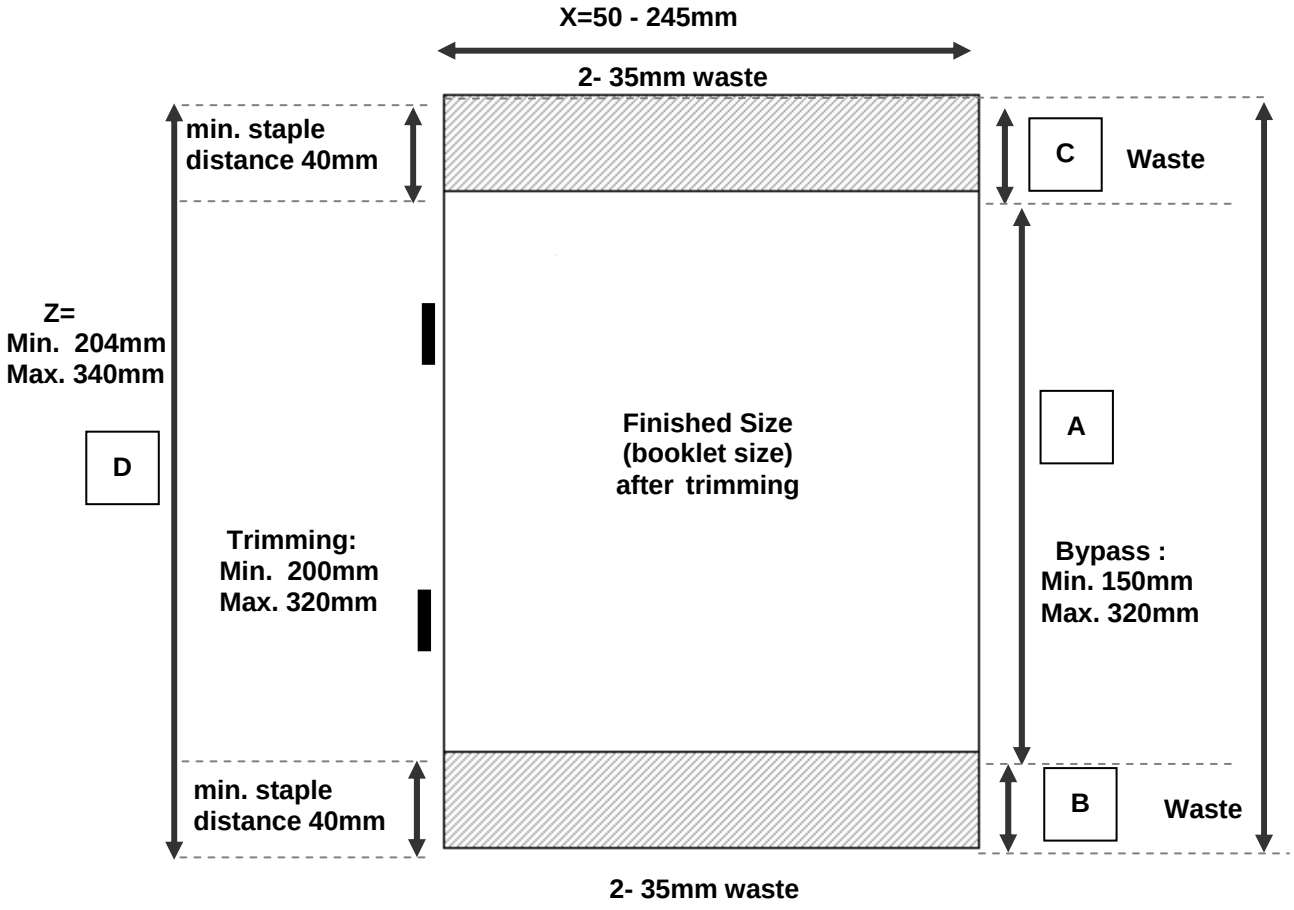
4. Operating the 2S Trimmer *(continued)*

4.3 Job Setup

Proceed the following steps to set up the Job:

1) Determine the length of the booklet before trimming (= D 'Input Size') in mm.
2) Determine the length of the booklet after trimming (= A 'Finished Size') in mm.
3) Subtract 'A' from 'D' and spread the difference (= 'Total Waste') over 'B' and 'C'.

If necessary, adjust the Trim Size symmetrical or asymmetrical (See Chapter 4.8 Center Offset).



The following formula has to be applied in order to get the desired result:

	Finished Size (booklet <u>after</u> trimming) (A)	
	Waste (front trim) (B)	
	Waste (rear trim) (C)	+
Equals:	**Input Size (booklet <u>before</u> trimming) (D)**	
or short:	**A + B + C = D**	

4. Operating the 2S Trimmer *(continued)*

4.4 Paper Size Setup

NOTE: “Standard paper size” has to be set once.

NOTE: “Select Paper Size” which is suitable for your requirements.

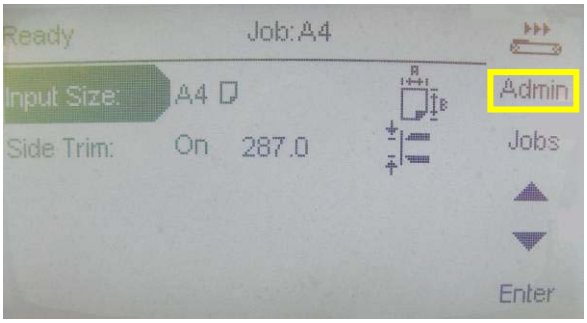


Fig.1

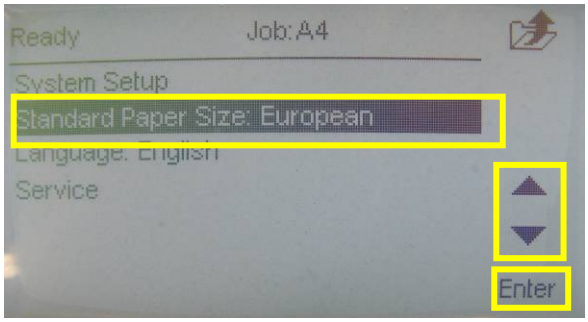


Fig.2

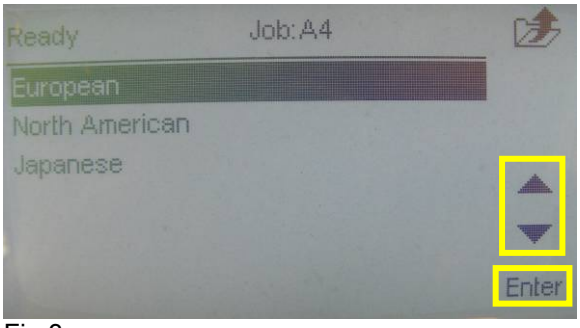


Fig.3

Step	Action	Remarks
1.	Enter ‘Admin’ menu	Press the ‘Admin’ button (Fig. 1)
2.	Enter ‘Standard Paper Size:’ menu	Use the ‘▲ / ▼ buttons’ to select ‘‘Standard Paper Size:’ and press the ‘Enter’ button. (Fig. 2)
3.	Select ‘Standard Paper Size:’	Use the ‘▲ / ▼ buttons’ to select the correct ‘Standard Paper Size:’ (Fig. 3). Save and confirm with [Enter]

4. Operating the 2S Trimmer *(continued)*

4.5 Job Setup

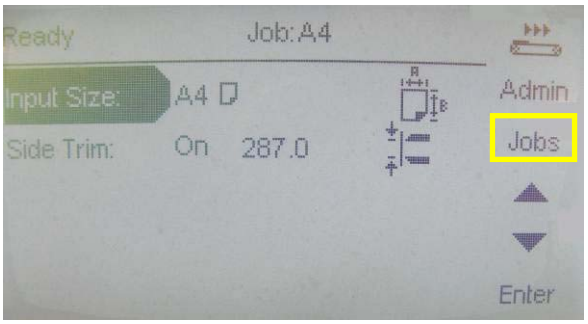


Fig. 1

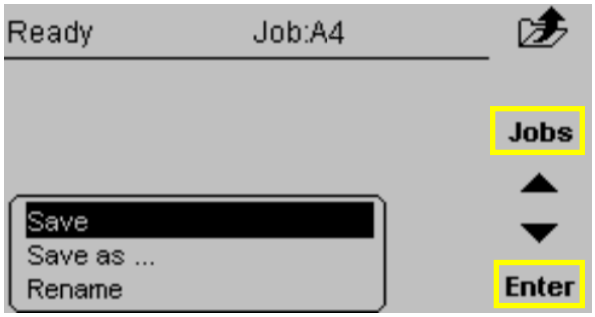


Fig. 2

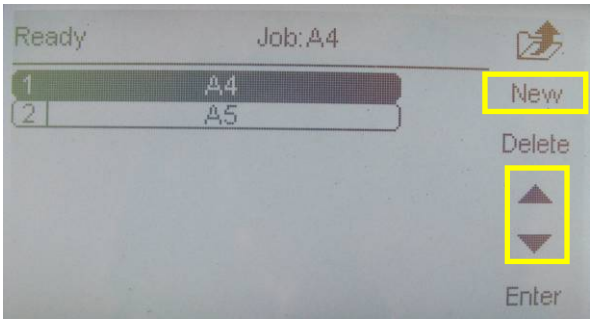


Fig. 3

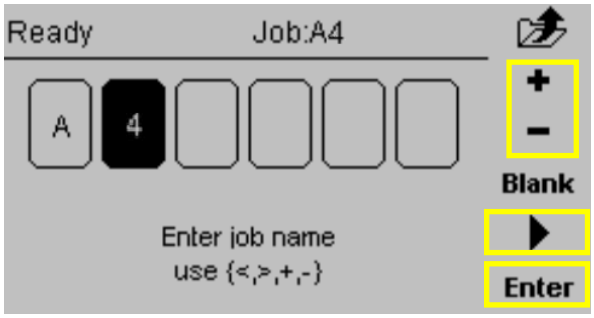


Fig. 4

Step	Action	Remarks
1.	Job Setup	Press the 'Jobs' button two times (Fig. 1& 2).
2A.	Make a new Job	Press the 'New' button (Fig. 3).
2A.	Enter Job name	Use the '+ / -' and '►' buttons (Fig. 4) to Enter the Job name and press the 'Enter' button. ⚠ **Attention: An "Loading Job" signal appears for a few seconds.**
2B.	Adjust a Job	Use the '▲ / ▼ ' buttons to select a Job and press the 'Enter' button to load or confirm. ⚠ **Attention: An "Loading Job" signal appears for a few seconds.**
3.	Adjust Input Size and/or Side Trim	Use the '▲ / ▼ ' and the '+ / -' buttons to set the desired settings for Input Size and Side Trim (See Chapter: 4.6 Paper Input Size Setup 4.7 Side Trim ON/OFF
4.	Save Job	After adjusting press 'Jobs' (Fig. 1) and save the current Job or 'Rename' the adjusted Job by pressing the 'Enter' button (Fig. 2). ⚠ **Attention: An "Saving Job" signal appears for a few seconds.** ⚠ **Attention: After Rename a Job, repeat step 2A 'Enter Job name'.**

4. Operating the 2S Trimmer *(continued)*

4.6 Paper Input Size Setup

NOTE: In the "Input Size" menu of the 2S Trimmer the paper Input Size can be set or adjusted.

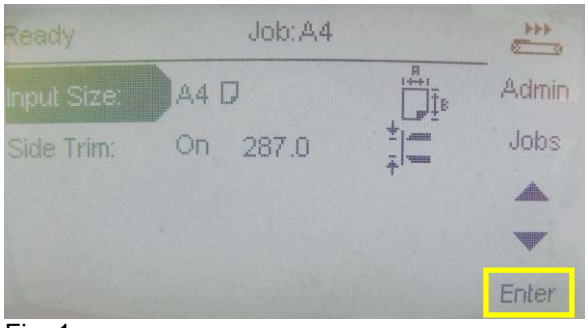


Fig. 1

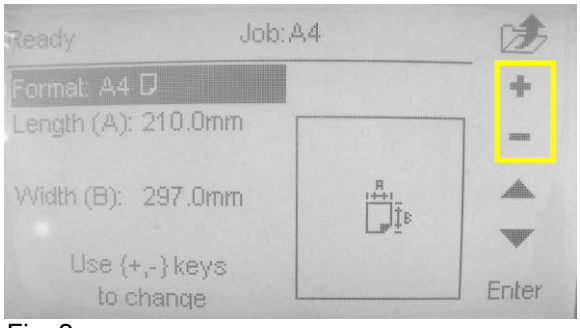


Fig. 2

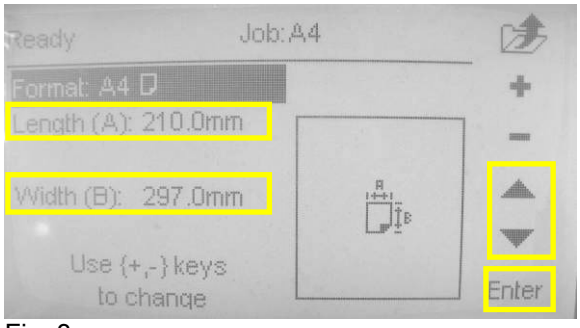


Fig. 3

Step	Action	Remarks
1.	Input Size adjustment	Use the '▲ / ▼ buttons' to select 'Input Size' and press the 'Enter' button (Fig. 1).
2A.	Adjust 'Input Size' A4 / A5	Use the '+ / -' buttons (Fig. 2) to switch between 'A4' and 'A5' paper Input Size .
2B.	Adjust 'Input Size' Length(A) / Width (B)	Use the '▲ / ▼ ' buttons (Fig. 3) to adjust the 'Length (A)' or 'Width (B)' in mm and use the '+ / -' buttons to adjust the values (A) or (B).
3.	Save Input Size adjustments	Save and confirm with [Enter] (Fig. 3).

4. Operating the 2S Trimmer *(continued)*

4.7 Side Trim ON / OFF

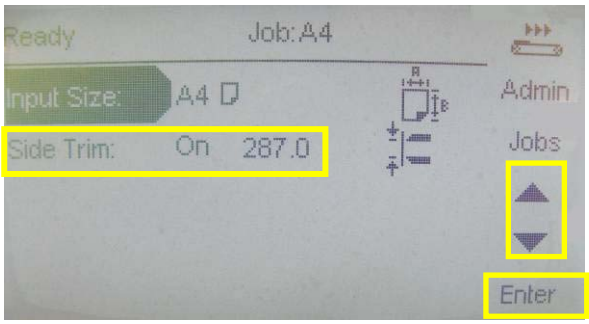


Fig. 1

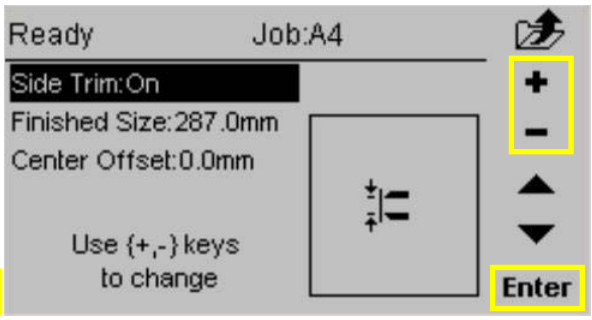


Fig. 2

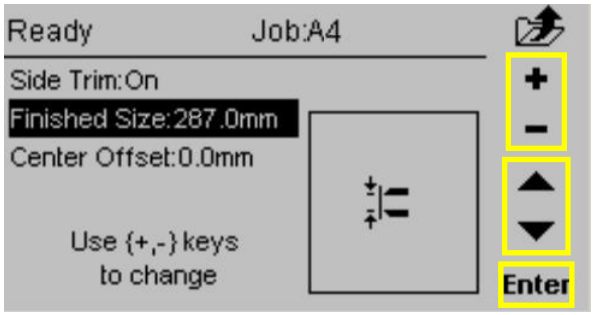


Fig. 3

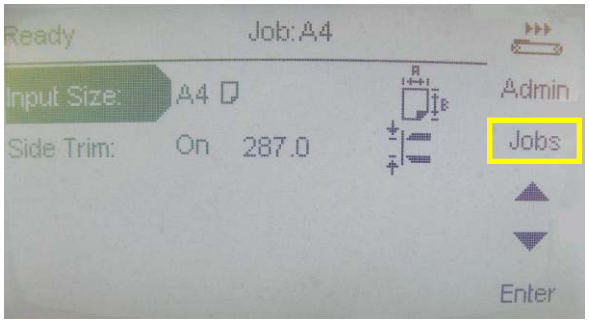


Fig. 4

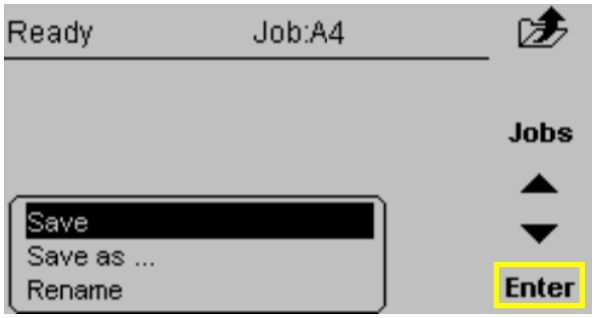


Fig. 5

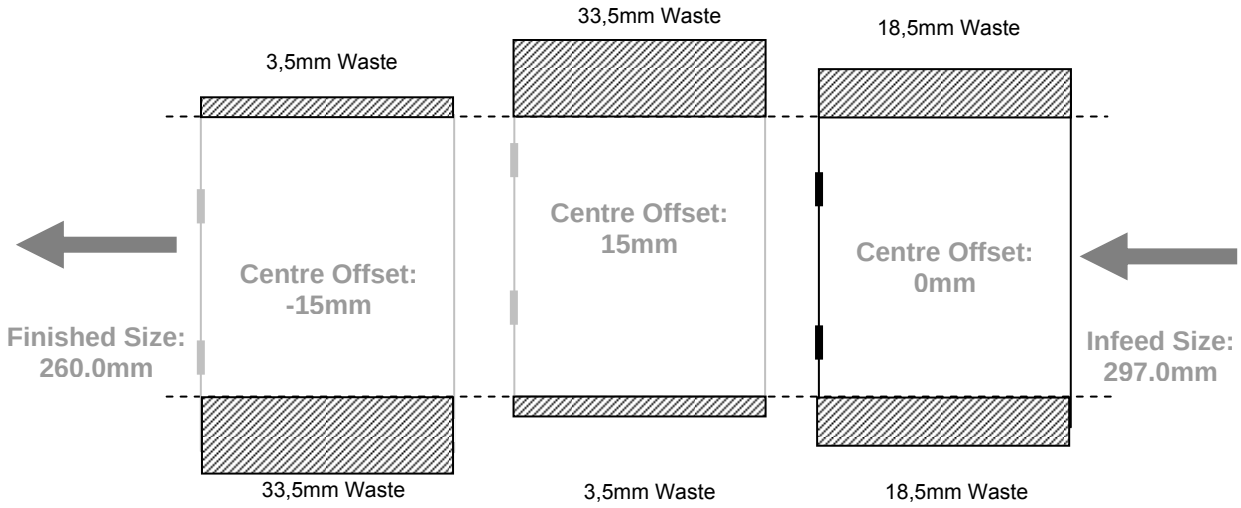
Step	Action	Remarks
1.	Side Trim ON/OFF	Use the '▲ / ▼ ' buttons on the UI to select 'Side Trim' and press the 'Enter' button (Fig. 1).
2.	Adjust 'Side Trim'	Use the '+ / -' buttons to select ON/OFF
3.	Adjust 'Finished Size'	Use the '▲ / ▼ ' buttons (Fig. 3) to select 'Finished Size' and use the '+ / -' buttons to adjust the 'Finished Size'. Press 'Enter' (Fig. 3) to confirm the settings.
4.	Save settings.	After all desired settings are adjusted press 'Jobs' (Fig. 4) and press 'Enter' (Fig. 5) to save the settings. ⚠ **Attention: A "Saving Job" signal appears for a few seconds.**

4. Operating the 2S Trimmer *(continued)*

4.8 Centre Offset

For trimming the bleed off the booklet a Center Offset can be set. This means that it is possible to trim asymmetrical (trim more from the upper or lower side of the booklet)

A **positive** Center Offset will result in a booklet trimmed more on the **upper** side of the booklet.
A **negative** Center Offset will result in a booklet trimmed more on the **lower** side of the booklet.
(See example below: Input Size 297.0mm, Finished Size 260.0mm)



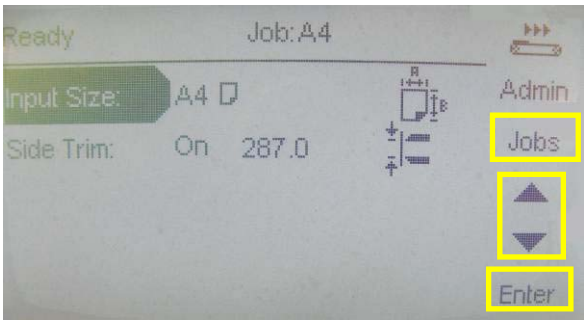


Fig. 1

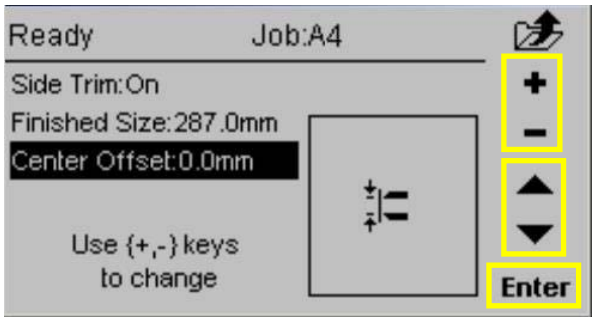


Fig. 2

Step	Action	Remarks
1.	Center Offset (if necessary)	Use the '▲ / ▼ ' buttons to select 'Side Trim' and press the 'Enter' button (Fig. 1).
2.	Adjust 'Center Offset'	Use the '▲ / ▼ ' buttons (Fig. 2) to select 'Center Offset' and use the '+ / -' buttons to adjust the 'Center Offset'. Press 'Enter' (Fig. 3) to confirm the settings.
3.	Save settings.	After the Center Offset is adjusted press 'Jobs' (Fig. 1) and press 'Enter' (Fig. 2) to save the settings.

4. Operating the 2S Trimmer *(continued)*

4.9 Purge Button

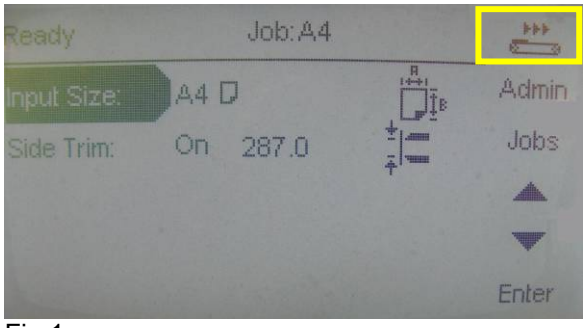


Fig.1

Step	Action	Remarks
1.	Press Purge Button.	Use the 'Purge buttons' to move booklets forward onto the Belt Stacker (Fig.1).

5. Troubleshooting

There are several Errors or Fault codes that generally can be solved by the operator:

- When the Trim Waste Bin is full or Cutting Waste is prevented from falling down into the Waste Bin, the message ‘Empty Trim Bin' will be displayed (Fig. 1).
- When a Paper Jam appears, like Clear Area, the message ‘Error 2S Tr’ will be displayed.

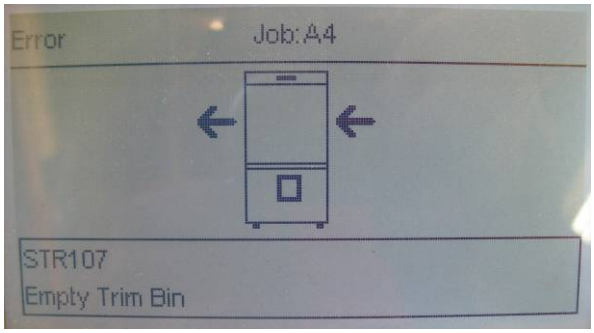


Fig. 1

5.1 Trim Waste Bin Full

Fig. 2

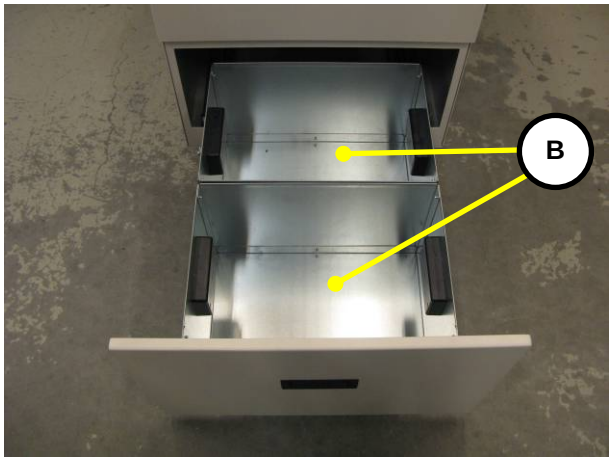


Fig. 3

Step	Action	Remarks
1.	Open the Trim Drawer.	(Fig. 2)
2.	Empty both Trim Waste bins (B).	(Fig. 3)
3.	Remove the remaining Cutting Waste.	⚠ **Attention: It is possible that there is still some Cutting Waste left inside the 2S Tr.**
4.	Place the Trim Waste bins back in the Trim Drawer.	(Fig. 3)
5.	Close the Trim Drawer.	(Fig. 2)

5. Troubleshooting (continued)

5.2 Clearing a Paper Jam

5.2.1 Warnings / Cautions

An increasing number of Paper Jams is an indication of the need to clean the belts.

The 2S Trimmer Upper knife blades are protected by a Knife Safety Plate that moves away during the Trim cycle movement.

WARNING! Never put fingers or other parts of the body between knives.

5.2.2 Clearing jams inside

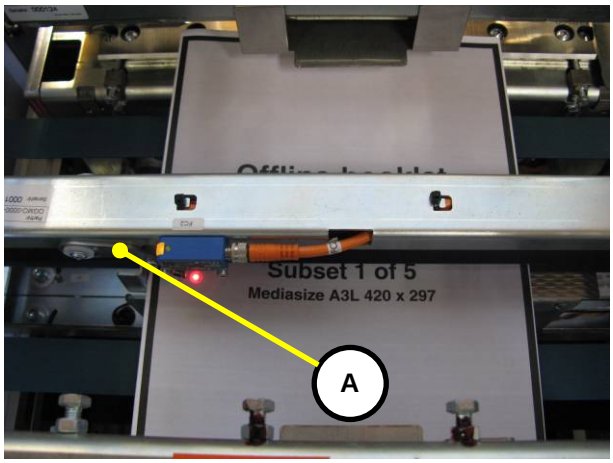


Fig.1

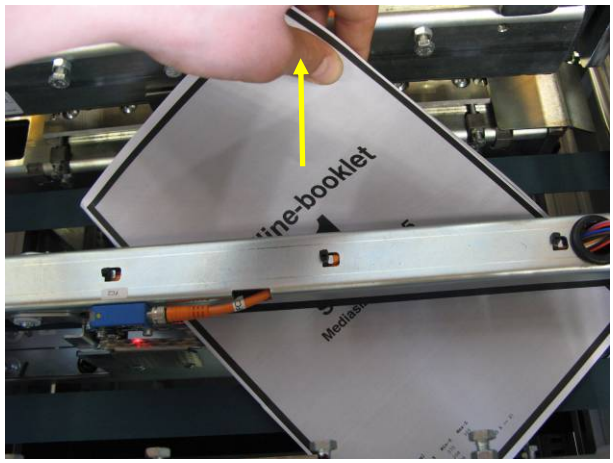


Fig. 2

Step	Action	Remarks
1. 1.1. 1.2.	Open the Top Cover. Close the Top Cover. The 2S Trimmer is trying to empty the machine.	The 2S Trimmer will automatically try to empty the machine when a Paper Jam is detected. **When the jam is not solved, the Knife blocks will automatically move out of each other to make space.**
2.	Pay attention to the indicated area	Pay attention to the indicated area displayed on the UI
3.	Open the Top Cover.	
4.	Turn 'OFF' the 2S Tr.	
5.	Clear the indicated area : Take the booklet out of the machine	The indicated area is displayed on the UI. If necessary push down the Paper Stop (A).
6.	Turn 'ON' the 2S Tr.	A signal 'Cover Open' will appear.
7.	Close the Top Cover.	The Knife blocks will automatically move to each other to set ready for current Job.

5. Troubleshooting (continued)

5.2 Clearing a Paper Jam (continued)

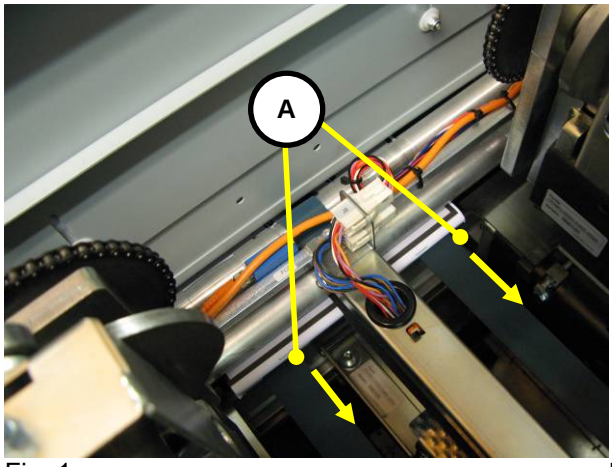


Fig. 1

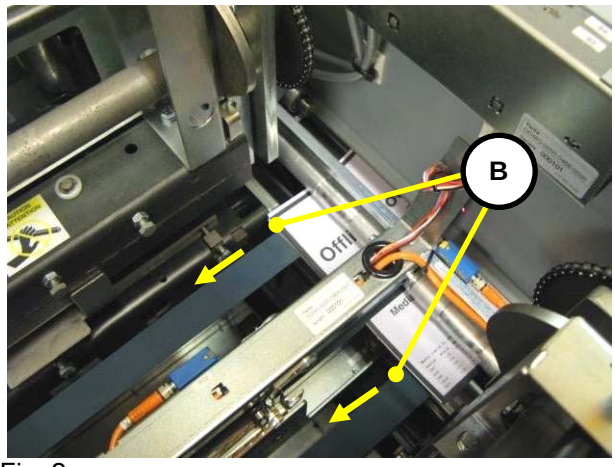


Fig. 2

Step	Action	Remarks
1. 1.1. 1.2.	Open the Top Cover. Close the Top Cover. The 2S Trimmer is trying to empty the machine.	The 2S Trimmer will automatically try to empty the machine when a Paper Jam is detected. **When the jam is not solved, the Knife blocks will automatically move out of each other to make space**.
2.	Pay attention to the indicated area	Pay attention to the indicated area displayed on the UI.
3.	Open the Top Cover.	
4.	Turn 'OFF' the 2S Tr.	
5.	Clear the indicated area: Take the booklet out of the machine	Pull the belts (A) in the 2S Trimmer towards the input area. The booklet will move into the 2S Tr. Pull the belts (B) in the 2S Trimmer towards the output area. The booklet will move into the 2S Tr.
6.	Take the booklet out of the machine.	Push or pull the booklet inside the 2S Trimmer so it is possible to take the booklet out of a machine.
7.	Turn 'ON' the 2S Tr.	A signal 'Cover Open' will appear.
8.	Close the Top Cover of the 2S Tr.	The Knife blocks of the 2S Trimmer will automatically move to each other to set ready for current Job.

5. Troubleshooting (continued)

5.3 Stop if booklet is too thick

'Stop if booklet too thick' is a value to set a warning for the operator when a booklet is to thick to trim. There are 3 different warnings, which are:

Value 1
Booklet too thick! not trimmed (NO STOP: only message in UI display)

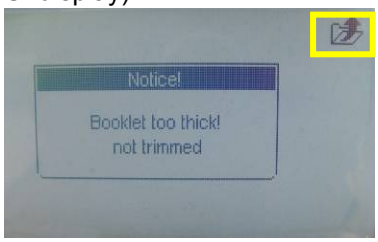


Fig. 1

Value 2
Booklet too thick (STR003) (SOFT STOP: booklet transported outside the machine)

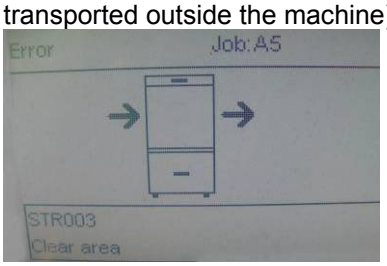


Fig. 2

Value 3
Booklet too thick (STR108) (HARD STOP: booklet still inside the machine)

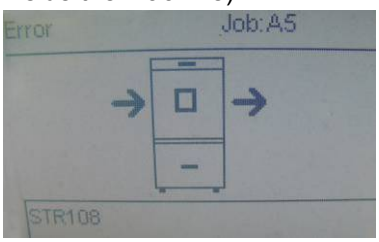


Fig. 3

NOTE: Ask your service technician to install one of the Values, which is suitable to your requirements.

NOTE: Next step is only for Value 2 and 3. For Value 1 just push "Escape" (Fig.1).

Step	Action	Remarks
1. 1.1. 1.2.	Open the Top Cover. Close the Top Cover. The 2S Trimmer is trying to empty the machine.	The 2S Trimmer will automatically try to empty the machine when a Paper Jam is detected. **When the jam is not solved, the Knife blocks will automatically move out of each other to make space**.
2.	Pay attention to the indicated area	Pay attention to the indicated area displayed on the UI.
3.	Open the Top Cover.	
4.	Turn 'OFF' the 2S Tr.	
5.	Clear the indicated area: Take the booklet out of the machine	Pull the belts (A) in the 2S Trimmer towards the input area. The booklet will move into the 2S Tr. Pull the belts (B) in the 2S Trimmer towards the output area. The booklet will move into the 2S Tr.
6.	Take the booklet out of the machine.	Push or pull the booklet inside the 2S Trimmer so it is possible to take the booklet out of a machine.
7.	Turn 'ON' the 2S Tr.	A signal 'Cover Open' will appear.
8.	Close the Top Cover of the 2S Tr.	The Knife blocks of the 2S Trimmer will automatically move to each other to set ready for current Job.

6. Cleaning / Maintenance

6.1 General

Before Cleaning or Maintenance, always make sure to disconnect the appropriate power cord.

An increasing number of jams is an indication of the need to clean the belts.

The exterior can be cleaned with a slightly moist cloth.

With exception of the belts, the interior of the 2S Trimmer does not need cleaning.

6.2 Cleaning the belts

The belts of the 2S Trimmer need to be cleaned regularly during normal conditions even if the 2S Trimmer has not been used for a while. How often this should be done depends on the paper type and print quality.
An increasing number of jams is an indication of the need to clean the belts.

Clean the belts with water and a lint free cloth.

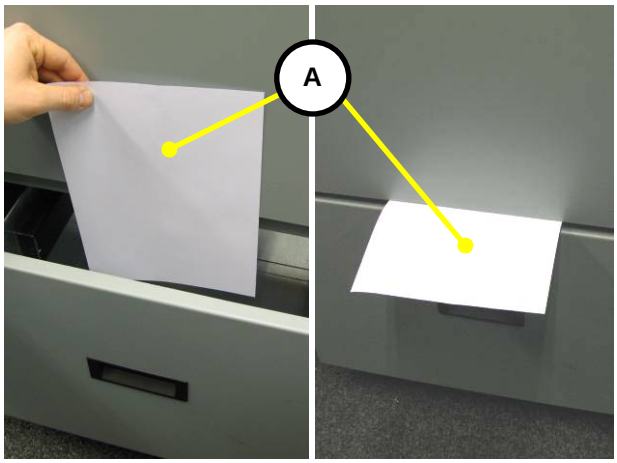


Fig. 1 Fig. 2

Fig. 3

Step	Action	Remarks
1.	Cover reflection sticker.	Take a paper (A) and put it between the Trim Drawer and close the Trim Drawer (Fig. 1 & 2). **The Knife blocks will automatically move out of each other to make space for cleaning the belts.**
2.	Open the Top Cover.	(Fig. 3)
3.	Turn off the 2S Tr	(Continue next page)

6. Cleaning / Maintenance (continued)

6.2 Cleaning the belts (continued)

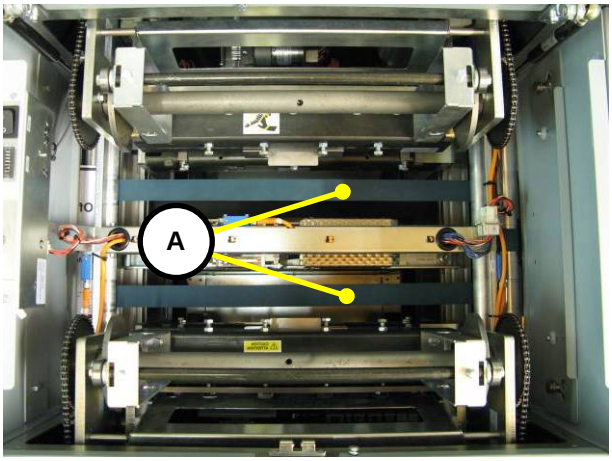


Fig. 1

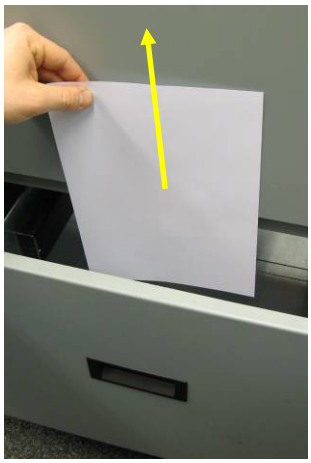


Fig. 2

Step	Action	Remarks
4.	Clean the belts	The upper belt (A) can easily be rotated in either direction. The lower belts can be rotated in either direction by pulling them (Fig. 1).
5.	Place the belts in normal position.	(It is possible that after cleaning and rotating the belts, the belts are removed from their normal position.)
6.	Remove the paper	Remove the paper from Trim Drawer and close the Trim Drawer (Fig. 2).
7.	Turn 'ON' the S2S Tr.	**A signal 'Cover Open' will appear.**
8.	Close the Top Cover.	**The Knife blocks will automatically move to each other to set ready for current Job.**

7. Technical information

Capabilities:

Compatibility:	*Standalone 2S TRIMMER:*
Capacity:	Up to 25 sheets (80 g/m^2, 100 pages booklet)

Electrical:

60Hz:	220/230V, 2.0A
50Hz:	220/230V, 2.0A
60Hz:	100/110/120/127V, 4.0A (upon request)

The 2-Side Trimmer should only be connected to an approved electrical system which is rated at a maximum of 16A and which is protected by circuit breakers.

Physical:

	Operational	On Pallet in box
Height	1200 mm	1440 mm
Width	700 mm	760 mm
Depth	1510 mm	1410 mm
Weight	~208 Kg	~250 Kg

Booklet specifications

	before trimming:	*trimmed:*
Minimum booklet height:	204 mm	200 mm
Maximum booklet height:	340 mm	320 mm

Technical specifications

Speed	1800 booklets/hour	
Trimming size (min-max)	2mm - 35mm each side	4mm - 70mm together
Paper Weight (min-max)	60 g/m^2 - 300 g/m^2	
A-symmetrical trim (min-max)	±15mm	
Input / Output sheets	Booklet Width (X) from 50 mm up to 245 mm Booklets Height (Z) 204 mm up to 340 mm	Note: Heights between 320 mm and 340 mm must be trimmed back to 320mm or shorter.
Booklet Staple Clearance from top/bottom (minimal)	40mm	
Noise Level (max)	70dB	

KONFORMITÄTSERKLÄRUNG

DECLARATION OF CONFORMITY
DÉCLARATION DE CONFORMITÉ

Wir/ We/ Nous: **Ernst Nagel GmbH**
Breitwiesenstr. 21
70565 Stuttgart
Germany

erklären in alleiniger Verantwortung, dass das Produkt/
declare under our sole responsibility that the product/
déclarons sous notre seule responsabilité que le produit

2S Trimmer

auf das sich diese Erklärung bezieht, in Übereinstimmung ist mit den Bestimmungen der EU Richtlinien/
to which this declaration relates is in conformity with the essential requirements of EEC directives/
auquel se réfère cette déclaration est en conformité avec les exigences essentielles des directives de la communauté européenne

89/336/EEC	und Änderungen/ and amendments/ et amendements
89/392/EEC	und Änderungen/ and amendments/ et amendements
73/23/EEC	und Änderungen/ and amendments/ et amendements

unter Anwendung der folgenden harmonisierten Normen/
by applying the following harmonized standards/
en appliquant les normes harmonisées suivantes

EN 60204-1	06.93
prEN 1010	10.99
EN 60950	08.92, + A1 + A2 + A3 + A4 + A11
EN 55022	09.98 Klasse B/ class B/ classe B
EN 55024	09.98
EN 61000-3-2	04.95 + A1 + A2 + A14
EN 61000-3-3	01.95

Jahr der Anbringung der CE-Kennzeichnung/
Year of affixing the CE marking/
L' an de l' application de la marque CE:

2010

Stuttgart, 22.Otober 2010

Ort und Datum/
Place and date/
Lieu et date

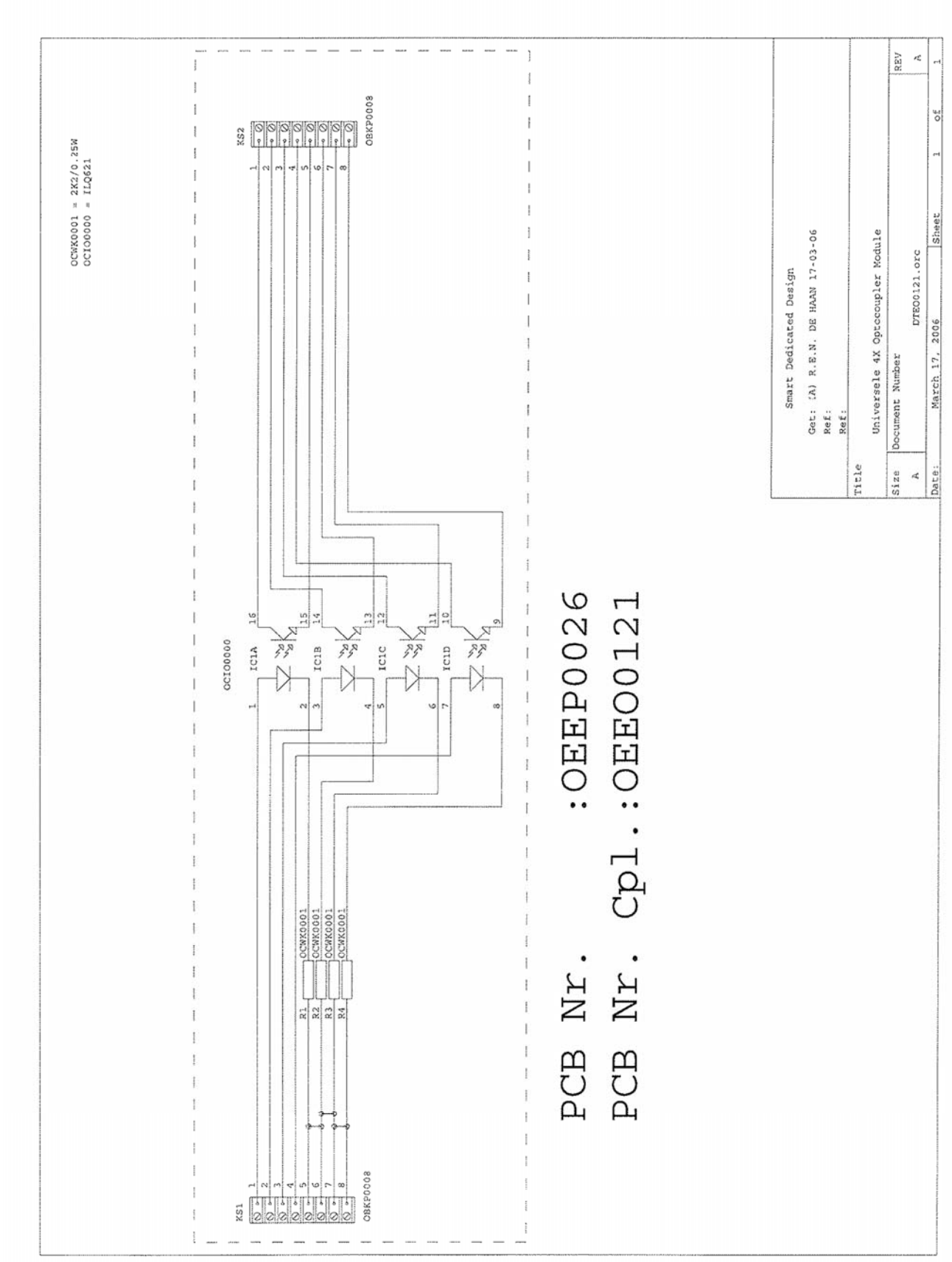
Geschäftsführer/
Managing Director /
Gérant

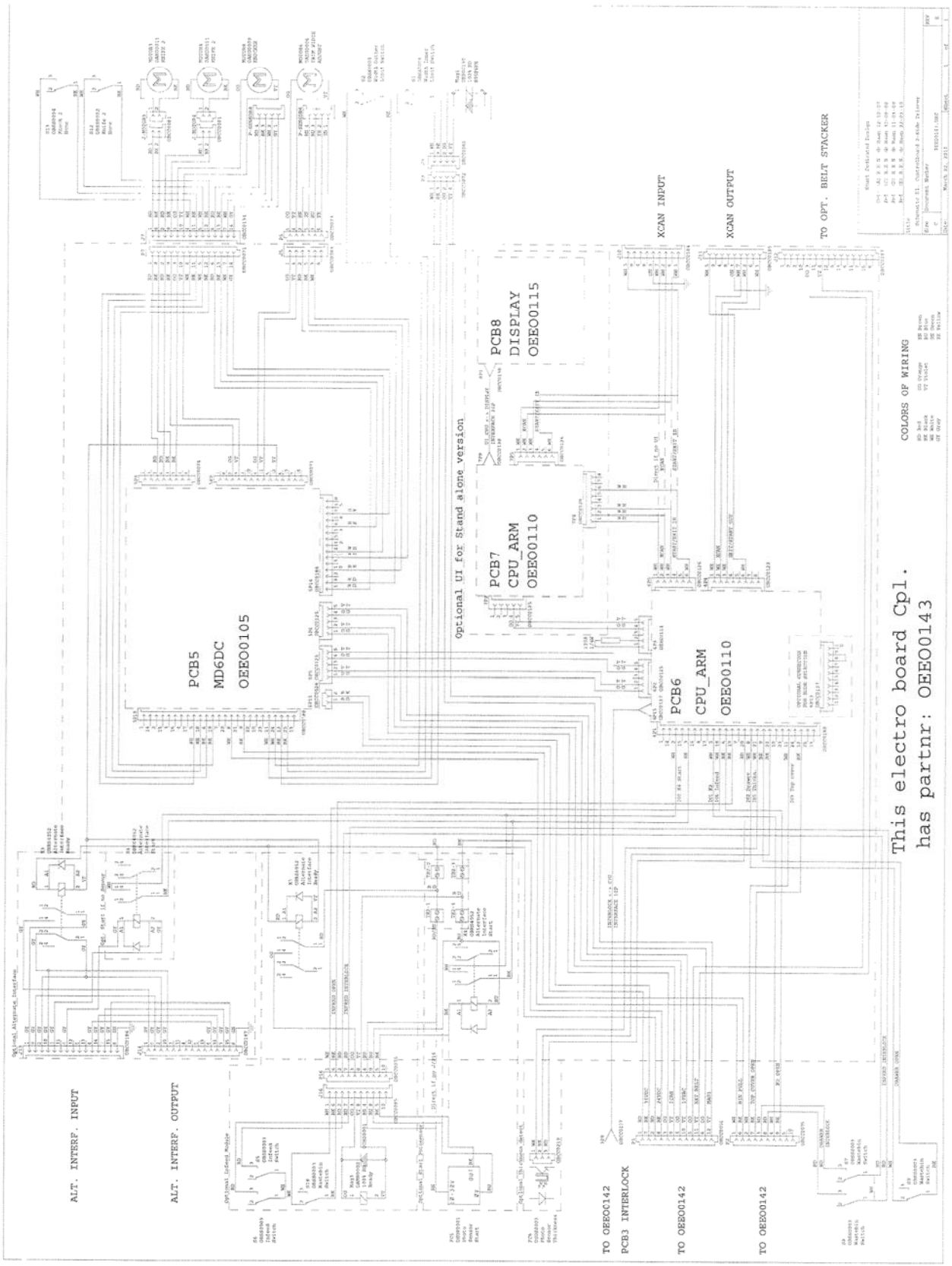
History

Rev. 1.0 16.11.2010

Notes

Wiring Diagrams

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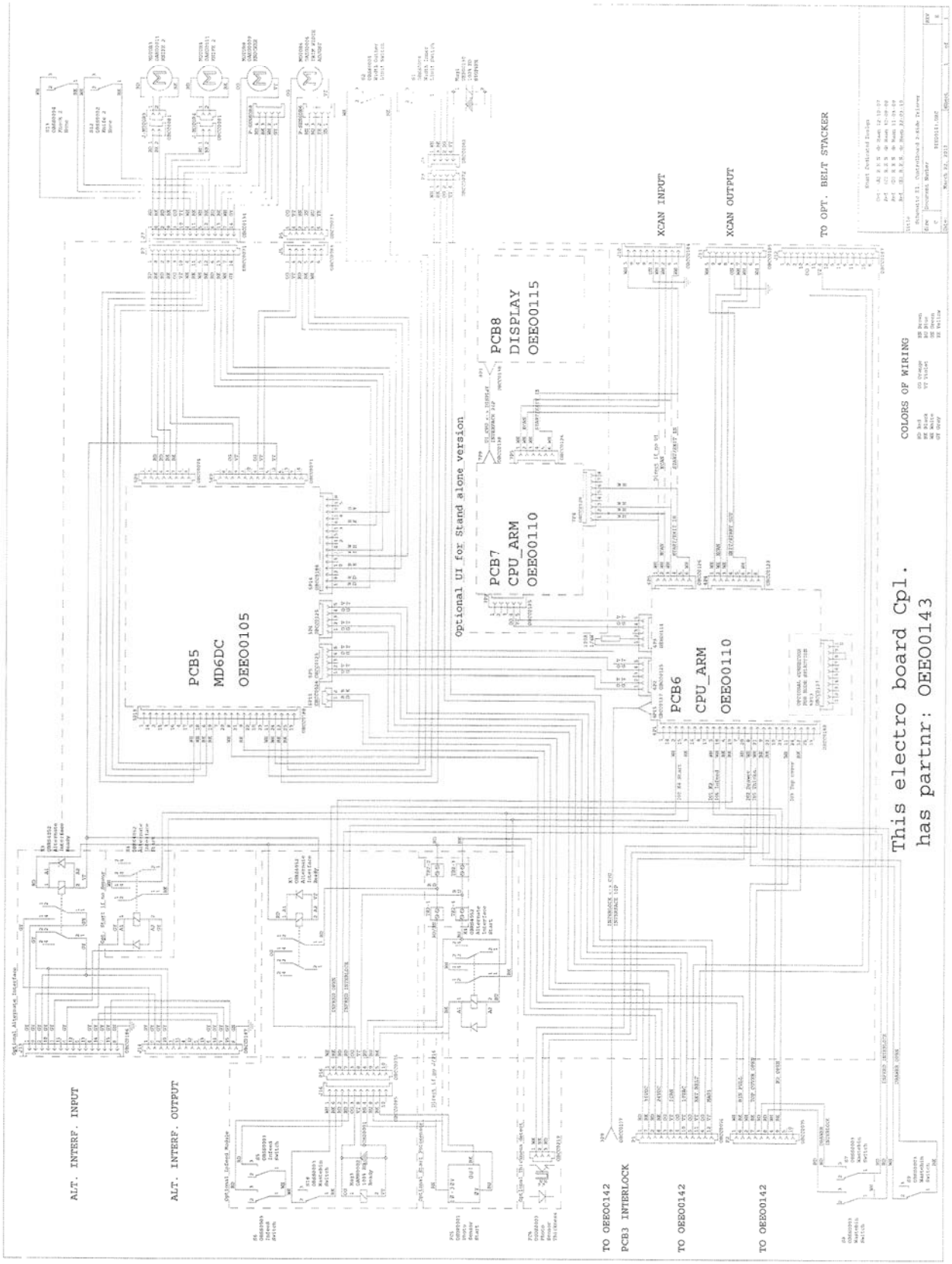
PCB5
MD6DC
OEE00105
PCB7
CPU_ARM
OEE00110
PCB6
CPU_ARM
OEE00110
PCB8
DISPLAY
OEE00115
Optional UI for Stand alone version
XCAN INPUT
XCAN OUTPUT
TO OPT. BELT STACKER
COLORS OF WIRING
ALT. INTERFP. INPUT
ALT. INTERFP. OUTPUT
TO OEE00142
PCB3 INTERLOCK
TO OEE00142
TO OEE00142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PCB5
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TO OEE00142
TO OEE00142